

must ship July 30 Split

# Work Order ID 60774 -1

Thursday, July 22, 2010 12:58:35 PM



Item ID: D4148-041

Revision ID: PRELIM *AD*

Item Name: Crosstube Lug Assembly, Fwd

Start Date: 7/22/2010 Start Qty: 4.00 <sup>3</sup>

Required Date: 7/29/2010 Req'd Qty: 4.00

Reference:

Accept



Setup Start



Stop



Cust Item ID:

Customer:

Approvals: Process Plan: *H*

Date: *10-7-22*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4148

*PA1 B A 10.07.22*

100



Small Fab

0.00

Memo

0.00

1- Assemble as per dwg

*ES 10/08/04*

110



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

*8.10.08.105*

*(x3)*

120



Packaging

Packaging

Identify as per dwg & Stock Location: *468*

0.00

Memo

0.00

*10/8/10 sf (3x)*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Work Order ID 60774

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Page 2

Item ID: D4148-041

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Start Date: 7/22/2010 Start Qty: 4.00

Required Date: 7/29/2010 Req'd Qty: 4.00

Reference:

Accept



Setup

Start



Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start



Stop



Sequence ID/  
Work Center ID

130



QC

Quality Control

Operation  
Description

QC21- Final Inspection - Work Order Release

Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Memo

0.00

10/08/09 *[Signature]*

*MF*

10-8-06

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, July 22, 2010 12:58:39 PM

Work Order ID: 60774

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Page 1

4

Start Date: 7/22/2010

Start Qty: 4.00

Required Date: 7/29/2010

Required Qty: 4.00

Comments: IPP Rev:A 10.06.24 new issue DD ver:EC

| Component Item ID/<br>Item Name       | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| ✓ D2690-6<br>Lanyard Assembly         |                        | Manufactured  | No          |                     |                  | 100             | Each               | 24.0000        | 1           | 4            |               |                |        |
|                                       |                        |               |             | <u>Location</u>     |                  |                 |                    |                |             |              |               |                |        |
|                                       |                        |               |             | ST020               |                  |                 |                    | 24             |             |              |               |                |        |
|                                       |                        |               |             |                     | 59960            |                 |                    | 24             |             |              |               |                |        |
| ✓ D3908-5<br>Eyebolt Stud             |                        | Manufactured  | No          |                     |                  | 100             | Each               | 15.0000        | 1           | 4            |               |                |        |
|                                       |                        |               |             | <u>Location</u>     |                  |                 |                    |                |             |              |               |                |        |
|                                       |                        |               |             | GA                  |                  |                 |                    | 1              |             |              |               |                |        |
|                                       |                        |               |             |                     | 57428            |                 |                    | 1              |             |              |               |                |        |
|                                       |                        |               |             | ST095               |                  |                 |                    | 14             |             |              |               |                |        |
|                                       |                        |               |             |                     | 58850            |                 |                    | 4              |             |              |               |                |        |
|                                       |                        |               |             |                     | 59670            |                 |                    | 10             |             |              |               |                |        |
| ✓ D4148-1<br>Crosstube Lug Plate, Fwd |                        | Manufactured  | No          |                     |                  | 100             | Each               | 0.0000         | 2           |              |               |                |        |
| ✓ D4148-3<br>Stud Receiver, Lower     |                        | Manufactured  | No          |                     |                  | 100             | Each               | 0.0000         | 1           |              |               |                |        |
| ✓ D3910-1<br>Crosstube Lug            |                        | Manufactured  | No          |                     |                  | 100             | Each               | 24.0000        | 1           | 4            |               |                |        |
|                                       |                        |               |             | <u>Location</u>     |                  |                 |                    |                |             |              |               |                |        |
|                                       |                        |               |             | st507               |                  |                 |                    | 24             |             |              |               |                |        |
|                                       |                        |               |             |                     | 59349            |                 |                    | 23             |             |              |               |                |        |
|                                       |                        |               |             |                     | 59708            |                 |                    | 1              |             |              |               |                |        |

B 60777

B 60775

D4148-5 qty 1 Batch: 60791

EP 10/08/04

4

8 EP 10/07/27

4 EP 10/07/27

4 EP 10/08/04

4

4 EP 10/08/04

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Picklist Print

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Page 2

Work Order ID: 60774

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd



✓ D4091-1  
  
 Mounting Lug

Manufactured No

100 Each

Start Date: 7/22/2010

Required Date: 7/29/2010

Start Qty: 4.00

Required Qty: 4.00

2.0000



1

4

Loc Code

*ES 0/08/04*

*360874 (B)*

✓ AN3C12A  
  
 Bolts

Purchased No

100 Each

44.0000



*11/07/22*  
*4*

*86*

Loc Code

*ES 0/08/04*

✓ AN4C13A  
  
 BOLT

Purchased No

100 Each

104.0000



4

Loc Code

*ES 0/08/04*

Location

ST460  
 60239

Loc Qty

2

2

Location

ST351  
 112314  
 114761  
 115016

Loc Qty

44

8

22

14

Location

ST357  
 113359  
 114108  
 114442  
 114615

Loc Qty

104

3

1

50

50

*16*

*13*

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Shop Packet Print

Page 2

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, July 22, 2010 12:58:39 PM

Work Order ID: 60774

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Page 3

Start Date: 7/22/2010

Start Qty: 4.00

Required Date: 7/29/2010

Required Qty: 4.00

MS17984-C413



Purchased

No

100 Each

28.0000



1

4

*Ep 5/10/08/04*

PIN, QUICK RELEASE

## Location

ST297

114340

## Loc Qty

4

ST314

114523

4

24

114774

1

114886

3

20

100 Each

## Loc Code

322.0000



7

2

2

248

*Ep 5/10/08/04*

*M115037*

*(280)*

## Loc Code

2,981.000



4

*Ep 5/10/08/04*

*16*

MS20615-4M20



Purchased

No

RIVET

## Location

ST323

114808

## Loc Qty

322

152

115054

170

100 Each

## Loc Code

2,981.000



4

MS21043-3



Purchased

No

Nut

## Location

FG

103691

## Loc Qty

76

76

ST301

112314

2905

2905

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| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries



# Picklist Print

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Work Order ID: 60774

Page 4

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd



✓ MS21043-4



Nut

Purchased

No

100

Each

1,220.000

Start Date: 7/22/2010

Start Qty: 4.00

Required Date: 7/29/2010

Required Qty: 4.00



*EP 5/10/08/04*

## Location

## Loc Qty

|        |      |
|--------|------|
| FG     |      |
| 104603 | 40   |
| ST301  | 40   |
| 112492 | 1180 |
| 113069 | 25   |
| 114348 | 8    |
| 114523 | 347  |
| 114784 | 500  |
|        | 300  |

## Loc Code

*DA*



*EP 5/10/08/04*

✓ NAS1149C0332R



Washer

Purchased

No

100

Each

3,480.000

## Location

## Loc Qty

|        |      |
|--------|------|
| ST297  |      |
| 113524 | 3480 |
| 113737 | 10   |
| 115000 | 150  |
|        | 3320 |

## Loc Code



*EP 5/10/08/04*

✓ NAS1149C0432R



Washer

Purchased

No

100

Each

730.0000

## Location

## Loc Qty

|        |     |
|--------|-----|
| ST297  |     |
| 114292 | 730 |
| 114742 | 140 |
|        | 590 |

## Loc Code



*EP 5/10/08/04*

Thursday, July 22, 2010 12:58:39 PM

Shop Packet Print

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| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

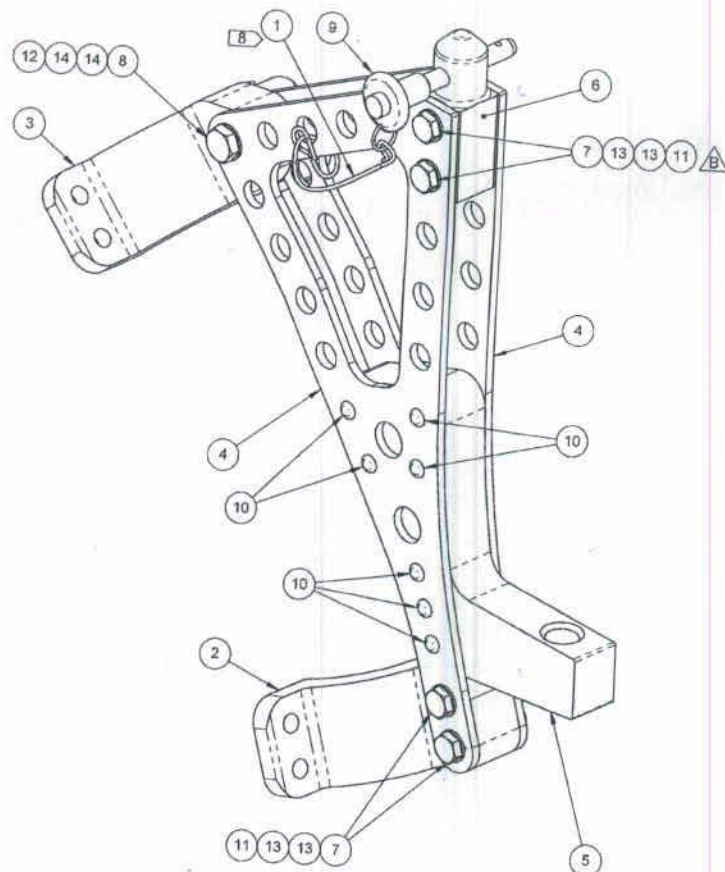
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries





**D4148-041 FWD X-TUBE LUG ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 3.47 lbs
- 8) ATTACH D2690-8 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

| ITEM | QTY<br>-041 | P/N           | DESCRIPTION          |
|------|-------------|---------------|----------------------|
|      | X           | D4148-041     | FWD X-TUBE LUG ASSY  |
| 1    | 1           | D2690-8       | LANYARD              |
| 2    | 1           | D3910-1       | X-TUBE LUG           |
| 3    | 1           | D4091-1       | X-TUBE LUG           |
| 4    | 2           | D4148-1       | MOUNTING LUG         |
| 5    | 1           | D4148-3       | FWD X-TUBE LUG PLATE |
| 6    | 1           | D4148-5       | STUD RECEIVER LOWER  |
|      |             |               | EYEBOLT STUD         |
| 7    | 4           | AN3C12A       |                      |
| 8    | 1           | AN4C13A       | BOLT                 |
| 9    | 1           | MS17984-C413  | PIP PIN              |
| 10   | 7           | MS20615-4M18  | RIVET                |
| 11   | 4           | MS21043-3     | NUT                  |
| 12   | 1           | MS21043-4     | NUT                  |
| 13   | 8           | NAS1149C0332R | WASHER               |
| 14   | 2           | NAS1149C0432R | WASHER               |

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 60774  
BS10-722

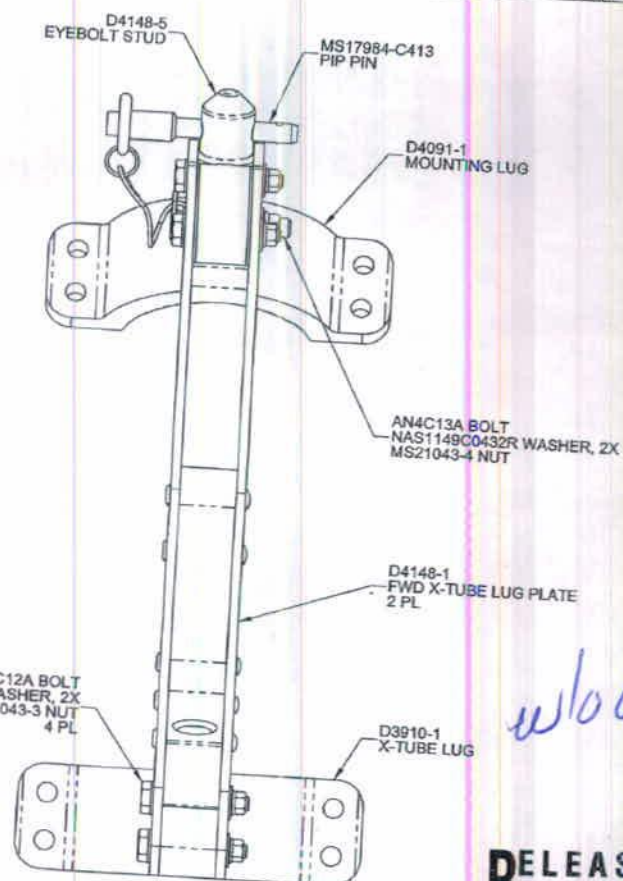
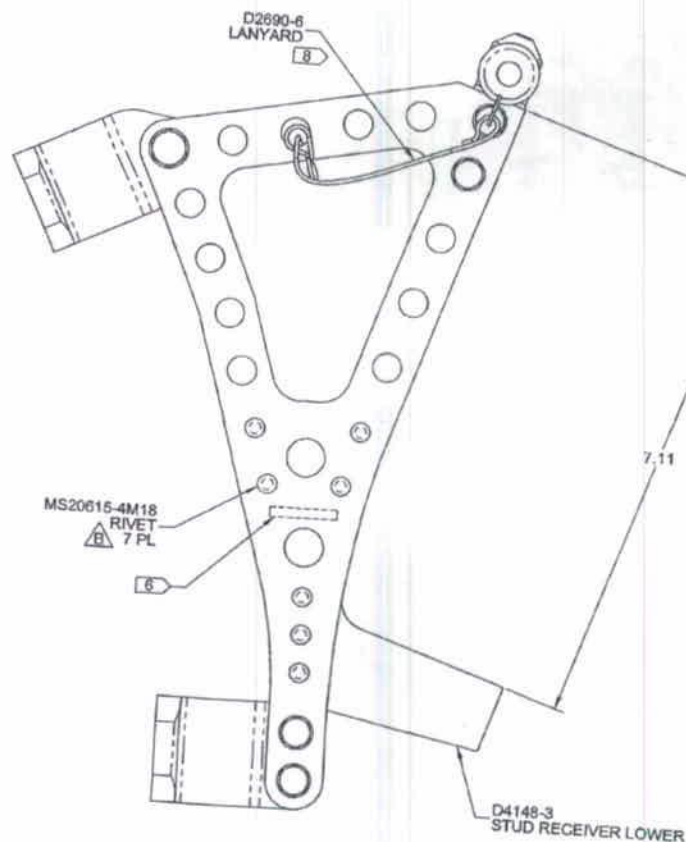
**RELEASED**  
2010-07-16  
*md*

|            |   |    |          |
|------------|---|----|----------|
| B          | REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1 & B7-2); MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); Q0.191 2 PL REPLACES Q0.129 3 PL (ZN D6-3); Q0.129 7 PL WAS 10 PL (ZN A7-3); Q0.181 WAS Q.129 (ZN C8-5); REASON: SEE TR-D550-507-2 REV. B. | MB | 10.07.05 |
| A          | NEW ISSUE   | MB | 10.06.16 |
| REV.       | DESCRIPTION   | BY | DATE     |
| DESIGN     | <i>1</i>  |    |          |
| DRAWN      | <i>1</i>  |    |          |
| CHECKED    | <i>1</i>  |    |          |
| MFG. APPR. | <i>1</i>  |    |          |
| APPROVED   | <i>1</i>  |    |          |
| DE APPR.   | <i>1</i>  |    |          |
| DATE       | 10.07.05  |    |          |

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4148** REV. B  
TITLE **FWD X-TUBE LUG ASSY** SHEET 1 OF 5  
SCALE NTS

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**D4148-041 FWD X-TUBE LUG ASSY**

**RELEASED**  
2010-07-16  
NTP

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>   |              |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA   |              |
| CHECKED    |          | DRAWING NO.   | REV. B       |
| MFG. APPR. |          | <b>D4148</b>  | SHEET 2 OF 5 |
| APPROVED   |          | TITLE   | SCALE        |
| DE APPR.   |          | <b>FWD X-TUBE LUG ASSY</b>  | NTS          |
| DATE       | 10.07.05 | COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR FOR REPRODUCTION WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD. |              |